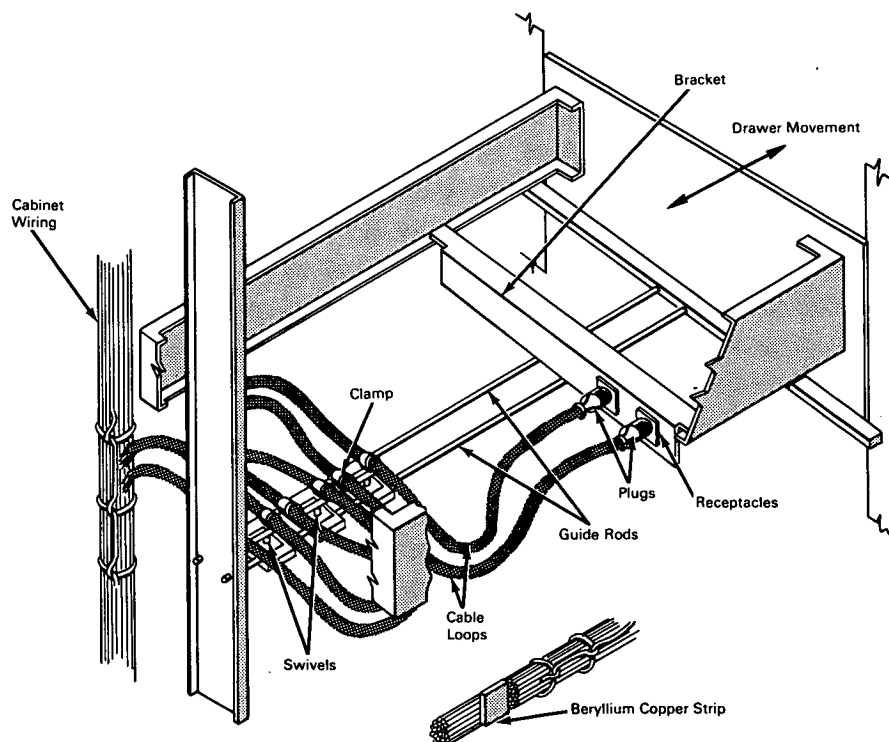


# NASA TECH BRIEF



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## Compact Retractor Protects Cabling Loops



### The problem:

In cabinet-mounted electronic equipment drawers, cabling to the cabinet wiring harness must be long enough to permit the drawer to be opened with the power on for certain tests and troubleshooting. The cable loops must be protected from chafing during opening and closing of the drawers. Present cable retractors take up much space, accommodate a minimum of wiring, and have relatively short service life.

### The solution:

A core and swivel retractor mechanism combined with cable stiffeners.

### How it's done:

Connector receptacles are attached to a bracket fastened to the bottom of the equipment drawer. The cabinet wiring harness cables plug into these connectors. The cables are looped through cable clamps mounted on plastic swivels that slide on stainless

(continued overleaf)

steel guide rods, so that the cable loops are free to pay out and retract as the drawer is opened and closed. The cables are laced onto continuous beryllium copper strips to prevent the cable loops from sagging.

**Notes:**

1. The plastic swivels on stainless-steel rods provide a self-lubricating mechanism that virtually eliminates wear.
2. Inquiries concerning this innovation may be directed to:

Technology Utilization Officer  
Marshall Space Flight Center  
Huntsville, Alabama, 35812  
Reference: B66-10018

**Patent status:**

No patent action is contemplated by NASA.

Source: North American Aviation, Inc.  
under contract to  
Marshall Space Flight Center  
(M-FS-561)